



Geriatricity

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Testosterone Therapy; The Evidence is Just Not Gelling

Over the last couple years many key randomized trials have made it apparent that testosterone replacement therapy may not offer the positive impact we had hoped in regards to functional, cognitive and cardiac health. A key study¹ looked for benefits around fatigue and related symptoms along with improvement in sexual function. The study showed statistically significant benefits but the benefits amounted to very limited clinical benefits, thus authors questioned the long-term use of testosterone gel for older patients with symptoms.

Another study failed to find an association between testosterone use and cognitive improvement in older patients with cognitive loss. Finally, in a trial² that tested the impact of testosterone gel on coronary plaques among 170 older men with symptomatic hypogonadism showed that treatment resulted in a greater increase in coronary artery non-calcified plaque volume.

A couple of others recent controlled trials³ have shown that testosterone may improve bone density (JAMA Intern Med 2017 Feb 21; [e-pub]. <http://dx.doi.org/10.1001/jamainternmed.2016.9539>) and anemia, but those studies were smaller and with potential unmeasurable variables.

So where do we stand at this point? In my opinion this review of recent data clearly puts in question the utility of testosterone gel in older patients, and given many potential side effects and costs of testosterone treatment, I will not be recommending the routine use of this therapy in older, frail post-acute and long-term care patients. I will continue to stay tuned to the upcoming trials that are underway to see if I will consider changing my mind any time soon.

1. Snyder et al. Effects of Testosterone Treatment in Older Men. *N Engl J Med* 2016; 374:611-624

2. Resnick et al. Testosterone Treatment and Cognitive Function in Older Men With Low Testosterone and Age-Associated Memory Impairment. *JAMA*. 2017 Feb 21;317(7):717-727. doi: 10.1001/jama.2016.21044

3. Roy et al. Association of Testosterone Levels With Anemia in Older Men, A Controlled Clinical Trial. *JAMA Intern Med*. 2017;177(4):480-490. doi:10.1001/jamainternmed.2016.9540

"C" the Difference! Metronidazole vs. Vanco in C- Diff Infections

A retrospective review recently published in JAMA validated that for mild to moderate C-Difficile infection, either one of the two antibiotics (metronidazole or vancomycin) should work as the first line therapy but for severe infections (patients who have leukocytosis with acute renal failure) vancomycin results in significantly lower mortality. Relapse rates though were not different. This well done study emphasize for us to follow the current guidelines recommending use of oral vancomycin as the first line agent for severe C- Diff cases.

Stevens VW et al. Comparative effectiveness of vancomycin and metronidazole for the prevention of recurrence and death in patients with *Clostridium difficile* infection. *JAMA Intern Med* 2017 Feb 06; [e-pub]. (<https://www.ncbi.nlm.nih.gov/pubmed/28166328>)

Unnecessary Pills Push up the Bills!

The incidence rates of adverse drug events (ADEs) in NHs range from 1.89 to 10.8 per 100 resident-months. The most common ADEs include bleeding, thromboembolic events, hypoglycemia, falls, and constipation.

Recent published work^{1,2} looked at the extent of ADEs in elders and the offending agents. ADEs cause 1% of emergency room visits in the elderly and more than half of these get hospitalized. Top four classes include anticoagulants, antiplatelet, antidiabetic and opioid drugs. Beers list of medications were responsible only for less than 4% of emergency room visits.

Authors of the mentioned studies recommend heightening our focus on the four above classes as a priority, as opposed to the complete Beer's list, for assuring prompt and meaningful impact on ADEs for our frail patients.

1. Kessler C et al. Reducing adverse drug events: The need to rethink outpatient prescribing. *JAMA* 2016 Nov 22/29; 316:2092. (<http://jamanetwork.com/journals/jama/article-abstract/2585959>)

2. Shehab N et al. US Emergency department visits for outpatient adverse drug events, 2013-2014. *JAMA* 2016 Nov 22/29; 316:2115. (<https://www.ncbi.nlm.nih.gov/pubmed/27893129>)

With Prescribing Power Comes Responsibility; Polypharmacy Management in Dementia

A recent retrospective study published in JAMA sheds light on the use of medications of questionable benefit in patients with dementia during the last year of their life. The authors found that more than 34% of patients with dementia were exposed to at least one medicine of questionable benefit during their final month. The good news is that living in an institutions was associated with a 15% reduction in the risk of being on more than one of such medications. Of the drug categories, anti-dementia medications were being used in 20% of the cases and lipid-lowering agents were still being used during the last month in 8% of the patients.

This study reminds that it is critical that ongoing polypharmacy review is one of the corner stones of geriatric management particularly for patients with dementia. Questionable meds not only lead to unnecessary harm, interactions, pill burdens but also result in higher costs and present higher workload for caregivers.

1. Use of Medications of Questionable Benefit During the Last Year of Life of Older Adults With Dementia
Morin, Lucas et al. *Journal of the American Medical Directors Association*, Volume 18, Issue 6, 551.e1 - 551.e7

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